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ABSTRACT

A study was conducted to assess the effects of a new class scheduling system at Harford Community College (HCC), which substituted 75-minute classes twice a week and 150-minute classes once a week for regular three 50-minute classes in order to save energy by reducing student travel to college. The study sought to determine the effects of these changes on credit generation and on students' work schedules, free time and participation in college activities; students' preferences for the new or old scheduling systems; and faculty perceptions of the pedagogical and logistical effects of these changes. Analysis of student records, a survey of the opinions of 280 of 1,732 returning or re-entry day students, and survey responses from 49 of 100 faculty members indicated that: (1) average student credit load fell 1% after the change; (2) the mean number of student trips per week to campus fell from 3.79 to 3.42; (3) both students and faculty indicated a preference for 75-minute classes twice a week and over half of the faculty respondents considered this schedule to be academically superior; (4) 51% of the students preferred the new schedule to the old, while 31% did not favor the new system; and (5) the majority of the student respondents felt that their work schedule, free time, and extracurricular activities were enhanced or were unaffected by the new schedule. (HB)

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THE EFFECT OF THE NEW SCHEDULING SYSTEM

ON STUDENT TRIPS TO CAMPUS

AND OTHER RELEVANT VARIABLES

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POLICY ANALYSIS: THE EFFECT OF THE NEW SCHEDULING SYSTEM ON STUDENT TRIPS TO CAMPUS AND OTHER RELEVANT VARIABLES

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Overview

In an age of spiraling fuel costs, many colleges have instituted policies designed to reduce student travel. In large part, Harford Community College's new scheduling system, (instituted in the Fall of 1981), was a response to this situation. The new schedule saved energy by substituting twice a week, 75 minute classes and once a week, 150 minute classes for the three times a week, 50 minute class and thus reduced student travel. The previous schedule consisted of approximately 40 percent twice a week classes and 60 percent three times a week classes. The evening class schedule was not affected.

Of course, the benefits of energy savings would be less attractive if the new scheduling system caused side effects harmful to student life, academic excellence, or the financial stability of the college. Therefore, these variables were also considered. Specifically, the principle factors considered in addition to student travel included the following:

(1) the effect on credit generation;
(2) the preference of students for class length and scheduling system;
(3) the effect on student work schedule;
(4) the effect on student free time;
(5) the effect on student participation in college activities;
(6) the perception of faculty concerning the pedagogical effects of the new schedule;
(7) the perception of faculty regarding the logistical effects of the new schedule;

The research reported below was designed to measure the above factors and serve as a validation and expansion of an earlier study conducted in the Fall of 1980. In the earlier study students were randomly selected to participate in a simulated registration which contrasted the new and old scheduling systems. The study supported the hypothesis that student travel would be reduced concomitantly with little change in the average student credit load. The study projected 37 less trips per hundred students per week or 12,810 less trips for the Fall of 1980. Projected FTE loss was minimal at 6.6 FTE or approximately one percent of the total. The above research and subsequent faculty recommendation led to the adoption of the new scheduling system on an experimental basis for academic year 1981-82.

Methodology and Rationale

This research was the culmination of three separate studies designed to measure actual change in student travel to campus and change in average student credit load from the Fall of 1980, to the Fall of 1981, as well as student and faculty perception of the overall effect of the new scheduling system.

The first study compared the actual change in days students had classes scheduled and the change in average credit load for day students (students taking one or more day classes or a combination of day and evening). The data contained within the student directory files for the test semesters and years was examined by hand to extract the number of credits and the number of scheduled class days for all day students. It was assumed that a student makes one trip to campus for each day a class is scheduled.

The second study was designed to seek student input regarding the effect of the new scheduling system on student life and student preference for the new schedule. A sample of 280 students was drawn from a population of 1,732 returning or re-entry day students attending 200 level courses. The sample was deliberately skewed toward students with sophomore status (52%) and students attending full time (68%), because these students have had the greatest experience with the previous schedule and are most affected by scheduling changes. The Fall, 1980, study clearly established overwhelming support of the new schedule by part time students.

The third study was designed to seek faculty input concerning the pedagogical and logistical effects of the new schedule. To this end, an open ended questionnarie was administered to all general faculty of which 49 were returned and analyzed out of a population of 100.

Results and Discussion

Effect on FTE Generation

Analysis indicated that the average student credit load for day students changed very minimally with the advent of the new scheduling system. The mean and median credit load was reduced .10 and .07 respectively while the mode remained constant at 12. The difference in the two means extrapolated for the 2,525 Fall, 1981, students yielded an 8.42 FTE or one percent loss under the new scheduling system.

Day Student
Credit Load Comparison

	Number of Credits		
	Fall, 1980	Fall, 1981	Difference
Mean	10.60	10.50	-.10
Median	11.82	11.75	-.07
Mode	12	12	
	N = 2,239	N = 2,525	

This result was identical to that predicted by the Fall, 1980, study and was further supported by the student questionnaire which indicated no change in credits taken with the new schedule.

Trips to Campus

The data supports the hypothesis that the new scheduling system reduces trips to campus. The mean number of scheduled class days was reduced .37 from 3.79 in 1980, to 3.42 in 1981. The median was reduced .48 days from 4.11 in 1980, to 3.63 in 1981. The mode dropped from five to four days.

Trips to Campus by Day Students

	Number of Days		
	Fall, 1980	Fall, 1981	Difference
Mean	3.79	3.42	-.37
Median	4.11	3.63	-.48
Mode	5	4	-1
	N = 2,239	N = 2,525	

The .37 reduction in the mean number of trips to campus is identical to that predicted by the Fall, 1980, study and is consistent with student reports of reduced travel. This reduction extrapolated for Fall, 1981, (N = 2,525) yields 14,014 less trips under the new scheduling system for a fifteen week semester.

If it is assumed that an average round trip is 15 miles, the number of miles saved would equal 210,210., and at a 20¢ per mile expense rate this would equal a $42,042.00 savings for the Fall of 1981. For a day population of 2,525 this averages to a $16.65 savings per student. For two semesters the savings would exceed $30.00. Of course the actual savings per student would vary and costs vis-a-vis increased traveling would increase for some as indicated in the following section.

Change by Days per Week

Although the overall effect of the new scheduling system was to reduce student travel, the percentage of students traveling in any given combination of days varied. Basically, the variation was consistent with what was logically expected given the scheduling changes. The number of students attending one day, two days, and four days per week increased respectively by 1 percent, 6 percent, and 19 percent while three and five day travelers decreased by 3 percent and 24 percent.

Percentage of Day Students
Attending by Days per Week

		Fall, 1980	Fall, 1981 (Percentages)	Difference
Days per Week	1	4	5	+1
	2	16	22	+6
	3	21	18	-3
	4	15	34	+19
	5	44	20	-24
		N = 2,239	N = 2,525	

This trend held true for students taking one course through those taking five or more classes. Change was most pronounced for the one class student group that now travels 15 percent more frequently on two days and 20 percent less frequently on three days; for the four course student group that travels 28 percent more often four days a week and 31 percent less often five times a week; and for the student group taking five or more classes that now travels four times a week at a 34 percent higher rate and five times a week at a 41 percent lower rate.

Class Length Preference

Both students and faculty indicated a preference for the twice a week format. Students prefer the 75 minute class at approximately a three-to-one ratio over the 50 minute format. This relationship holds true for the one class student through all credit loads.

Day Student Preference for Class Length

		Number	Percentage
Days per Week	1	26	9
	2	173	62
	3	69	25
No Pref.		10	4

Of particular interest was the finding that 26 percent of the students taking one course and 19 percent of the students taking two courses preferred the once a week, 150 minute format. This gives credence to the proposition that a sizeable market may exist for classes offered once a week.

Although not asked directly to indicate a preference, over half of the faculty respondents remarked that the 75 minute format was academically superior. However, a few faculty members were opposed to the 75 minute format for specific subjects in their disciplines. These classes included skill subjects in Office Education, Developmental Math, and Lab Sciences. Several faculty were not affected by the change.

Also, a few faculty remarked that the once a week, 150 minute classes may be too long for any course and/or may not be appropriate for their discipline. In any event, faculty members emphasized that teaching strategies may need adjustment and/or replacement with the advent of different class time frames.

Scheduling Preference

Students were in favor of the new scheduling system with 51 percent of the students surveyed prefering the new schedule, 31 percent not prefering and 18 percent having no preference. Breaking these figures down into credit load categories reveals a similar picture except in the over fifteen credit category which yielded 39 percent for and 39 percent against.

Day Students' Scheduling Preference

	Number	Percentage
Prefer	141	51
Do Not Prefer	86	31
No Preference	50	18
	N = 277	

However, both students and faculty offered a number of suggestions regarding logistics of the new schedule. The principal suggestions included the following: (1) course times and lengths should be flexible: some courses should meet three or more times a week; (2) coordinate classes better: day-evening, Monday-Thursday/Tuesday-Friday, morning-afternoon; (3) provide support services earlier in the morning; (4) popular course offerings should be better distributed

Effect on Student Life

All three variables, work schedule, free time and student activities, were perceived by the majority of students as being enhanced or not affected

by the new schedule. Thirty-one percent perceived the new schedule as being more convenient to their work schedule while only 9 percent felt it was an obstacle. The remaining 60 percent saw no effect, although many of these may not have been working. Similarly, 43 percent reported more free time under the new system as contrasted to 10 percent with less time and 47 percent with no effect. Finally, 89 percent saw the new schedule as not affecting their participation in student activities while 4 percent reported more and 7 percent less involvement.

Summary

In summary, the four studies supported the contention that the new scheduling system substantially reduced travel without introducing harmful spin off effects. Indeed, the new schedule was perceived as a positive factor for academic affairs, student work schedule and student free time. Further, both faculty and students preferred the new system and finally, the faculty consensus (as expressed during the December general faculty meeting) held the problems that were identified could be handled within the new system.

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